IN THE CLAIMS:

Please amend claims 1-7, 10-16, 19, 21, 23-30, 33-39, 42, 44, and 46, as set forth below.
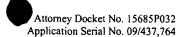
1.   (Currently Amended) A method to determine ~~a cellular communication base station (BS)~~ an antennae array weight set corresponding to a subscriber unit (SU) for cellular communications between the SU and a first base station (BS), comprising:

transmitting a plurality of ~~CDMA~~ test pilot downlink signals from the first BS to the SU, each test pilot downlink signal processed with a different weight set than the other test pilot downlink signals, each test pilot downlink signal comprising a CDMA pilot signal not normally used by the first BS;

receiving a report signal for at least one of the test pilot downlink signals; and

selecting a weight set from the plurality of weight sets based, at least in part, on the received report signal.

2.   (Currently Amended) The method of Claim 1 ~~wherein a first one of said,~~ further comprising transmitting a CDMA pilot downlink ~~signals~~ signal from the first BS to the SU, wherein the CDMA pilot downlink signal includes a first identifier identifying the first BS.

3.   (Currently Amended) The method of Claim 2 wherein ~~a second~~ one of said ~~CDMA~~ test pilot downlink signals includes a second identifier that is different from said first identifier, the second identifier identifying a second BS.

4.   (Currently Amended) The method of Claim 3 wherein said first and second identifiers identify a first and second BS, said second BS being is located from said first BS by a distance sufficient to assure that the CDMA pilot downlink signal transmitted by the first BS and containing either of said first and second identifiers transmission from the first BS to the SU of said one test pilot signal including the second identifier will not interfere with communications between said second BS and said SUs currently communicating with said second BS.

5.   (Currently Amended) The method of Claim 3 wherein said first CDMA pilot downlink signal identifies a first BS and wherein said SU also receives a third, further comprising:

receiving a CDMA pilot downlink signal including the second identifier from a the second BS, said SU generating and transmitting one of said report signals to said first BS, said report signal indicating the signal strength of said third CDMA pilot downlink signal from the second BS; and wherein said first BS determines

determining whether to handoff said SU to said second BS based on the signal strengths reported for said first, second, and third CDMA pilot signals signal transmitted by the first BS, said one test pilot signal including the second identifier transmitted by the first BS, and said CDMA pilot signal transmitted by the second BS.

6.   (Currently Amended) The method of ~~Claim 3~~ Claim 1 wherein said cellular ~~communication conforms~~ communications conform to a cellular standard in which each SU automatically monitors each of a plurality of CDMA pilot downlink signals in a set of CDMA pilot downlink signals ~~defined in messages sent by said first BS to said SU~~, said ~~SU generating one of said report messages when said SU determines that one of said CDMA pilot downlink signals in said set of CDMA pilot signals has a signal quality that exceeds a threshold value, said report message identifying said CDMA pilot downlink signal~~ test pilot signals selected from the set of CDMA pilot downlink signals.

7.   (Currently Amended) The method of Claim 6 wherein said cellular standard is IS-95 and wherein said set of CDMA pilot downlink signals comprises one of ~~said~~ a Candidate Set, a Neighbor Set, ~~or~~ and a Remaining Set as defined in that standard.

8.   (Previously Added) The method of claim 1, further comprising:

determining whether to hand off the SU to a second BS based, at least in part, on the received report signal.

9.   (Previously Added) The method of claim 8, further comprising:

sending an estimate of the weight set to be used after handoff to the second BS.

10.   (Currently Amended) An article of manufacture containing a machine-readable medium having stored thereon data representing sequences of instructions which, when executed by a processor, cause the processor to perform operations comprising:

transmitting a plurality of ~~CDMA~~ test pilot downlink signals from a <u>first base station(BS)</u> to a SU, each <u>test</u> pilot downlink signal processed with a different weight set from the other <u>test</u> pilot downlink signals<u>, each test pilot downlink signal comprising a CDMA pilot signal not normally used by the first BS</u>;

receiving a report signal for at least one of the <u>test</u> pilot downlink signals; and

selecting a weight set from the plurality of weight sets based, at least in part, on the received report signal.

11.   (Currently Amended) The article of claim 10, wherein ~~a first one of~~ the <u>instructions, when executed by the processor, cause the processor to perform operations further comprising transmitting</u> CDMA pilot downlink ~~signals~~ <u>signal</u> from the first BS to the SU, wherein the CDMA pilot downlink <u>signal</u> includes a first identifier <u>identifying the first BS</u>.

12.   (Currently Amended) The article of claim 11, wherein ~~a second~~ <u>one</u> of the ~~CDMA~~ <u>test</u> pilot downlink signals includes a second identifier that is different from the first identifier<u>, the second identifier identifying a second BS</u>.

13.   (Currently Amended) The article of claim 12, wherein ~~the first and second identifiers identify first and second BSs,~~ the second BS ~~being~~ is displaced from the first BS by a distance sufficient to assure that ~~the CDMA pilot downlink signal transmitted by the first BS and containing the second identifier~~ transmission from the first BS to the SU of said one test pilot signal including the second identifier will not interfere with communications between the second BS and ~~the~~ SUs currently communicating with the second BS.

14.   (Currently Amended) The article of claim 12, wherein the ~~first CDMA pilot downlink signal identifies a first BS and wherein the SU also receives a third~~ instructions, when executed by the processor, cause the processor to perform operations further comprising:

receiving a CDMA pilot downlink signal including the second identifier from ~~a~~ the second BS, the SU generating and transmitting one of the report signals to the first BS, the report signal indicating the signal strength of the ~~third~~ CDMA pilot downlink signal from the second BS; and ~~wherein the first BS determines~~

determining whether to handoff the SU to the second BS based on the signal strengths reported for the ~~first, second, and third~~ CDMA pilot ~~signals~~ signal transmitted by the first BS, said one test pilot signal including the second identifier transmitted by the first BS, and the CDMA pilot signal transmitted by the second BS.

15.   (Currently Amended) The article of ~~claim 12~~ claim 10, wherein ~~the~~

cellular ~~communication conforms~~ communications between the SU and first BS conform

to a cellular standard in which each SU automatically monitors each of a plurality of

CDMA pilot downlink signals in a set of CDMA pilot downlink signals ~~defined in~~

~~messages sent by the first BS to the SU~~, the ~~SU generating one of the report messages~~

~~when the SU determines that one of the CDMA pilot downlink signals in the set of~~

~~CDMA pilot signals has a signal quality that exceeds a threshold value, the report~~

~~message identifying the CDMA pilot downlink signal~~ test pilot signals selected from the

set of CDMA pilot downlink signals.

16.   (Currently Amended) The article of claim 15, wherein the cellular

standard is IS-95 and wherein the set of CDMA pilot downlink signals comprises one of

a Candidate Set, a Neighbor Set, ~~or~~ and a Remaining Set.

17.   (Previously Amended) The article of claim 10, having stored thereon data

representing sequences of instructions which, when executed by a processor, cause the

processor to further perform the operation comprising:

    determining whether to hand off the SU to a second BS based, at least in part, on

the received report signal.

18.   (Previously Amended) The article of claim 17, having stored thereon data representing sequences of instructions which, when executed by a processor, cause the processor to further perform the operation comprising:

sending an estimate of the weight set to be used after handoff to the second BS.

19.   (Currently Amended) An apparatus comprising:

receive signal circuitry for connecting with an array of antennae of a base station, to receive at least one report signal, the report signal corresponding to at least one ~~CDMA~~ test pilot signal, the at least one test pilot signal comprising a CDMA pilot signal not normally used by the base station; and

a transmit weight processor, coupled with the receive signal circuitry, to determine a weight set applied to a downlink signal based, at least in part, on the received report signal.

20.   (Previously Added) The apparatus of claim 19, further comprising:

transmit circuitry, coupled with the transmit weight processor, to apply the determined weight set to beamform a downlink signal.

21.   (Currently Amended) The apparatus of claim 20, wherein the downlink signal is a CDMA pilot signal used by the base station.

22.   (Previously Added) The apparatus of claim 20, wherein the downlink signal is a data signal.

23. (Currently Amended) The apparatus of claim 20, further comprising:

a pilot signal processor, coupled with the transmit circuitry, to generate a plurality

of ~~CDMA~~ test pilot signals.

24. (Currently Amended) A method to determine ~~a communication base station (BS)~~ an antennae array weight set corresponding to a subscriber unit (SU) for communications between the SU and a first base station (BS), comprising:

transmitting a plurality of test pilot downlink signals from the BS to the SU, each test pilot downlink signal processed with a different weight set than the other test pilot downlink signals, each test pilot downlink signal comprising a pilot signal typically used for at least one of controlling power, ~~handing off between base stations and determining a communication BS antennae array weight set~~ and base station hand off that is not normally used by the first BS;

receiving a report signal for at least one of the pilot downlink signals; and

determining the weight set corresponding to the SU based on the report signal.

25. (Currently Amended) The method of Claim 24 ~~wherein a first one of said~~ further comprising transmitting a pilot downlink ~~signals~~ signal from the first BS to the SU, wherein the pilot downlink signal includes a first identifier identifying the first BS.

26. (Currently Amended) The method of Claim 25 wherein ~~a second~~ one of said test pilot downlink signals includes a second identifier that is different from said first identifier, the second identifier identifying a second BS.

27.   (Currently Amended) The method of Claim 26 wherein ~~said first and second identifiers identify a first and second BS,~~ said second BS ~~being~~ is located from said first BS by a distance sufficient to assure that ~~the pilot downlink signal transmitted by the first BS and containing either of said first and second identifiers~~ transmission from the first BS to the SU of said one test pilot signal including the second identifier will not interfere with communications between said second BS and ~~said~~ SUs currently communicating with said second BS.

28.   (Currently Amended) The method of Claim 26 ~~wherein said first pilot downlink signal identifies a first BS and wherein said SU also receives a third,~~ further comprising:

receiving a pilot downlink signal including the second identifier from ~~a~~ the second BS, said SU generating and transmitting one of said report signals to said first BS, said report signal indicating the signal strength of said ~~third~~ pilot downlink signal from the second BS; and ~~wherein said first BS determines~~

determining whether to handoff said SU to said second BS based on the signal strengths reported for said ~~first, second, and third~~ pilot ~~signals~~ signal transmitted by the first BS, said one test pilot signal including the second identifier transmitted by the first BS, and said pilot signal transmitted by the second BS.

29.   (Currently Amended) The method of ~~Claim 26~~ Claim 24 wherein said

~~cellular communication conforms~~ communications conform to a cellular standard in

which each SU automatically monitors each of a plurality of pilot downlink signals in a

set of pilot downlink signals ~~defined in messages sent by said first BS to said SU~~, said ~~SU~~

~~generating one of said report messages when said SU determines that one of said pilot~~

~~downlink signals in said set of pilot signals has a signal quality that exceeds a threshold~~

~~value, said report message identifying said pilot downlink signal~~ test pilot signals

selected from the set of pilot downlink signals.

30.   (Currently Amended) The method of Claim 29 wherein said cellular

standard is IS-95 and wherein said set of pilot downlink signals comprises one of ~~said~~ a

Candidate Set, a Neighbor Set, ~~or~~ and a Remaining Set as defined in that standard.

31.   (Previously Added) The method of claim 24, further comprising:

determining whether to hand off the SU to a second BS based on the report signal.

32.   (Previously Added) The method of claim 31, further comprising:

sending an estimate of the weight set to be used after handoff to the second BS.

33.   (Currently Amended) An article of manufacture containing a machine-readable medium having stored thereon data representing sequences of instructions which, when executed by a processor, cause the processor to perform operations comprising:

transmitting a plurality of test pilot downlink signals from a first base station(BS) to a SU, each test pilot downlink signal comprising a pilot signal typically used for at least one of power control and base station hand off that is not normally used by the BS, each test pilot downlink signal processed with a different weight set from the other test pilot downlink signals;

receiving a report signal for at least one of the test pilot downlink signals; and

determining the weight set corresponding to the SU based on the report signal.

34.   (Currently Amended) The article of claim 33, wherein the instructions, when executed by the processor, cause the processor to perform operations further comprising transmitting a first one of the pilot downlink signals signal from the first BS to the SU, wherein the pilot downlink signal includes a first identifier identifying the first BS.

35.   (Currently Amended) The article of claim 34, wherein a second one of the test pilot downlink signals includes a second identifier that is different from the first identifier, the second identifier identifying a second BS.

36.   (Currently Amended) The article of claim 35, wherein ~~the first and second identifiers identify a first and second BS,~~ the second BS ~~being~~ is located from the first BS by a distance sufficient to assure that ~~the pilot downlink signal transmitted by the first BS and containing either of said first and second identifiers~~ transmission from the first BS to the SU of said one test pilot signal including the second identifier will not interfere with communications between the second BS and ~~the~~ SUs currently communicating with the second BS.

37.   (Currently Amended) The article of claim 35, wherein the ~~first pilot downlink signal identifies a first BS and wherein the SU also receives a third~~ instructions, when executed by the processor, cause the processor to perform operations further comprising:

receiving a pilot downlink signal including the second identifier from ~~a~~ the second BS, the SU generating and transmitting one of the report signals to the first BS, the report signal indicating the signal strength of the ~~third~~ pilot downlink signal from the second BS; and ~~wherein the first BS determines~~
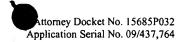
determining whether to handoff the SU to the second BS based on the signal strengths reported for the first, second, and third pilot ~~signals~~ signal transmitted by the first BS, said one test pilot signal including the second identifier transmitted by the first BS, and said pilot signal transmitted by the second BS.

38. (Currently Amended) The article of ~~claim 35~~ claim 33 wherein ~~the cellular communication conforms~~ communications between the SU and first BS conform to a cellular standard in which each SU automatically monitors each of a plurality of pilot downlink signals in a set of pilot downlink signals ~~defined in messages sent by the first BS to the SU~~, the ~~SU generating one of the report messages when the SU determines that one of the pilot downlink signals in the set of pilot signals has a signal quality that exceeds a threshold value, the report message identifying the pilot downlink signal~~ test pilot signals selected from the set of pilot downlink signals.

39. (Currently Amended) The article of claim 38, wherein the cellular standard is IS-95 and wherein the set of pilot downlink signals comprises one of ~~the~~ a Candidate Set, a Neighbor Set, ~~or~~ and a Remaining Set as defined in that standard.

40. (Previously Added) The article of claim 33, further comprising instructions which, when executed by a processor, cause the processor to further perform the operation comprising:

determining whether to hand off the SU to a second BS based on the report signal.

41. (Previously Added) The article of claim 40 further comprising instructions which, when executed by a processor, cause the processor to further perform the operation comprising:

sending an estimate of the weight set to be used after handoff to the second BS.

42.   (Currently Amended) An apparatus comprising:

receive signal circuitry for connecting with an array of antennae <u>of a base station,</u>

the receive signal circuitry to receive at least one report signal, the report signal

corresponding to at least one <u>test</u> pilot signal, the <u>test</u> pilot signal <u>comprising a pilot</u>

<u>signal typically</u> used for at least one of controlling power, ~~handing off between base~~

~~stations and determining a communication BS antennae array weight set~~ <u>and base station</u>

<u>hand offs that is not normally used by the BS</u>;

a transmit weight processor, coupled with the receive signal circuitry, for

determining a weight set applied to a downlink signal, the weight set determined by the at

least one report signal;

43.   (Previously Added) The apparatus of claim 42, further comprising:

transmit circuitry, coupled with the transmit weight processor, the transmit

circuitry applying the weight set to beamform a downlink signal.

44.   (Currently Amended) The apparatus of claim 43, wherein the downlink

signal is a pilot signal <u>normally used by the BS</u>.

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45.   (Previously Added) The apparatus of claim 43, wherein the downlink signal is a data signal.

46.   (Currently Amended) The apparatus of claim 43, further comprising:

a pilot signal processor, coupled with the transmit circuitry, to generate a plurality of <u>test</u> pilot signals.